

Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) **EP 1 122 184 A1**

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:
08.08.2001 Bulletin 2001/32

(51) Int Cl.7: **B65D 43/02**, B65D 21/02,
B65D 43/26

(21) Application number: **01100943.8**

(22) Date of filing: **17.01.2001**

(84) Designated Contracting States:
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE TR
Designated Extension States:
AL LT LV MK RO SI

(72) Inventor: **Arvidsson, Thomas**
341 35 Ljungby (SE)

(74) Representative: **Linde, Leif**
Vernamo Patentbyrå AB,
Persegård
274 93 Skurup (SE)

(30) Priority: **04.02.2000 SE 0000351**

(71) Applicant: **Emballator Lagan Plast Aktiebolag**
341 91 Ljungby (SE)

(54) **A container with a cover**

(57) A container (2) with a cover (16) has an upper edge portion (6) with an outer, downwardly directed flange (8), and the cover (16) has at its edge portion a U-shaped, downwardly open section (18). When the cover is positioned on the container the downwardly open section (18) of the cover encloses the upper edge portion (6) of the container while providing a sealing action between the upper edge portion of the container and the U-shaped section (18) of the cover along a peripherally extending sealing surface. The downwardly directed flange (8) of the container has an upwardly foldable portion (10) which is adapted at its folding upwards to lift the cover from the edge portion of the container by means of its engagement with the edge of the cover (16). The peripherally extending sealing surface is positioned separated from the upwardly foldable portion (10) of the outer, downwardly directed flange (8) of the container which provides that the cover can be sealingly connected with the container subsequently to the removal of the cover from the container.

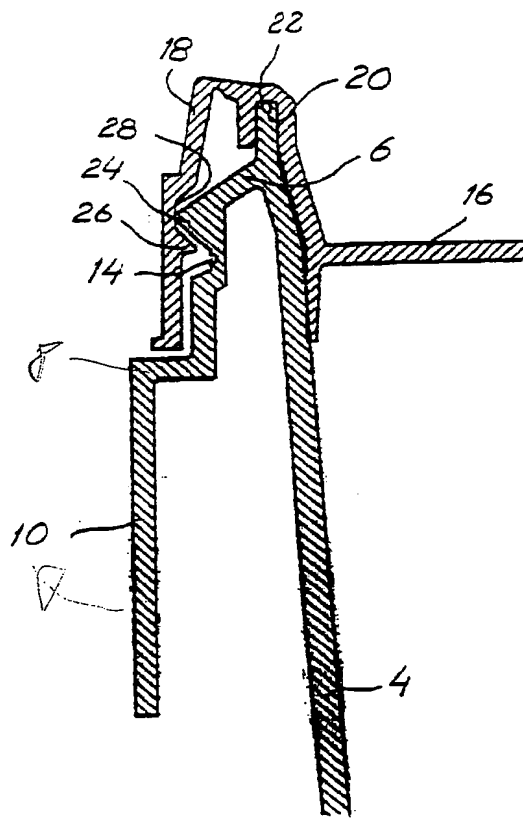


Fig. 3

EP 1 122 184 A1

Description

[0001] The present invention relates to a container with a cover.

[0002] The container which preferably consists of plastic has an upper edge portion with an outer downwardly directed flange. The cover which preferably also consists of plastic material has at its edge portion a U-shaped, downwardly open section which when the cover is positioned on the container encloses the upper edge portion of the container while sealing the upper edge portion of the container in relation to the U-shaped section of the cover along a peripherally extending sealing surface. In addition thereto the downwardly extending flange of the container has an upwardly foldable portion which is adapted at its folding upwards to engage the edge of the cover to lift the cover from the edge portion of the container with the object of facilitating the loosening of the cover from the container. The upwardly foldable portion of the downwardly extending flange of the container is separated from the rest of the flange by means of indications of fracture, and when the cover is for the first time released from the container the upwardly foldable portion is separated from the rest of the flange so that there is established gaps between the upwardly foldable portion and the rest of the flange. In previously known containers of this kind the sealing surface between the cover and the container is positioned so that it extends along the upwardly foldable portion of the outer, downwardly directed flange of the container. This provides that the cover can not be repositioned on the container in such a way that the cover sealingly encloses the container after the cover has for the first time been removed from the container. A container with a cover of this kind is previously known from the European patent 93105464.7.

[0003] The object of the invention is to provide a container with a cover of said kind, in which it is possible to reposition the cover on the container with maintained sealing action after the cover has been removed from the container. Another object is to provide a container with a cover, in which the opening of the cover is facilitated by the fact that the edge of the cover is initially subjected to an outwardly directed movement at the folding upwards.

[0004] In order to comply with this object the container is characterized in that all peripherally extending sealing surfaces are positioned separated from the upwardly foldable portion of the outer, downwardly extending flange of the container so that the sealing surfaces maintain their sealing effect after the cover has for the first time been removed by means of the upwardly foldable portion.

[0005] In a container according to the invention it is possible to reposition the cover with a tight connection to the container.

[0006] In a preferred embodiment of the invention the U-shaped, downwardly open section encloses the up-

per edge portion of the container while providing a sealing action between the upper edge portion of the container and the U-shaped section of the cover along two peripherally extending sealing surfaces when the cover is positioned on the container. Thereby, the one sealing surface can be provided by an edge positioned at the upper edge portion of the container, said edge being upwardly directed and engaging a groove in the U-shaped section of the cover. The other sealing surface can be constituted by a projection positioned at the upper edge portion of the container, said projection being outwardly directed and being peripherally extending and engaging an opposite surface of the U-shaped section of the cover.

[0007] It is suitable that the upper edge portion of the container and the U-shaped section of the cover are provided with engagement surfaces engaging each other for fixing the cover to the container when the cover is positioned on the container. Thereby, the engagement surface positioned at the upper edge portion of the container can be positioned on the outwardly directed, peripherally extending projection on which the second sealing surface is arranged, so that this projection engages a complementary projection on the U-shaped section of the cover in order to fix the cover to the container when the cover is positioned on the container.

[0008] An embodiment of the container with a cover according to the invention shall in the following be described with reference to the accompanying drawings.

[0009] Fig. 1 shows a container according to the invention without a cover.

[0010] Fig. 2 shows a partial section of the container with a cover positioned on the container.

[0011] Fig. 3 is a partial section of the container with a cover positioned on the container in the area of a portion of the downwardly directed flange of the container, said portion being foldable upwards.

[0012] Fig. 4 is a partial section corresponding to Fig. 3 showing the upwardly foldable portion at the upwardly folding thereof in order to lift the cover from the edge portion of the container.

[0013] In Fig. 1 there is shown a container 2 according to the invention without a cover. The container is manufactured from a plastic material and has a substantially cylindrical outer wall 4 having an upper edge portion 6 which has an outer, downwardly directed flange 8. The downwardly directed flange 8 has a portion 10 which is foldable upwards and is separated from the rest of the flange 8 by means of vertical indications of fracture 12. The upwardly foldable portion 10 is foldable around a groove 14 forming a pivot. Preferably the downwardly directed flange 8 has an upwardly foldable portion of the same kind as the upwardly foldable portion 10 at the diametrically opposite side of the container.

[0014] Fig. 2 is a section of the edge portion 6 of the container outside the upwardly foldable portion 10, the edge portion of the cover 16 which is formed as a U-shaped, downwardly open section 18 encloses the up-

per edge portion 6 of the container.

[0015] The edge portion 6 of the container has a sealing surface which is constituted by an upwardly directed edge 22 engaging a groove 20 in the U-shaped section 18 of the cover 16. The downwardly extending flange 8 of the container has a peripherally extending, outwardly directed projection 24 cooperating with a peripherally extending, inwardly directed projection 26 on the U-shaped section 18 of the cover 16. The projection 24 engages the inner surface 28 of the U-shaped section 18 on the cover 16 and forms here a second, peripherally extending sealing surface between the container and the cover.

[0016] Fig. 3 shows a section corresponding to Fig. 2 through the upper edge portion of the container and the U-shaped, downwardly open section of the cover in the area of the upwardly foldable portion 10 of the flange 8. The upwardly foldable portion 10 is connected to the upper part of the upper edge portion of the container by means of the groove 14 forming a pivot at the folding of the upwardly foldable portion 10. When the upwardly foldable portion 10 is folded upwards as shown in Fig. 4 the cover is lifted from the container by the fact that the upwardly foldable portion 10 engages the free edge of the U-shaped section 18 of the cover. At the upwardly folding of the upwardly foldable portion 10 the connections 12 between the portion 10 and the rest of the flange 8 are fractured. At previously known containers having a cover of the kind in which the cover is lifted by means of an upwardly foldable portion of the flange the sealing surface is positioned in connection with the upwardly foldable portion 10 which brings about that the cover can not sealingly close the container when the cover is repositioned on the container after having been removed for the first time.

[0017] In accordance with the present invention two sealing surfaces are positioned separated from the upwardly foldable portion 10 of the downwardly extending flange 8 of the container, the sealing surfaces being constituted by the edge 22 and the projection 24 are positioned above the groove 14 defining the upwardly foldable portion 10. This provides that the cover can tightly close the container after having been removed therefrom by the fact that the sealing surfaces are positioned above the gaps being formed between the portion 10 and the rest of the flange 8 subsequently to the upwardly folding of the portion 10.

[0018] The invention can be modified within the scope of the following claims.

Claims

1. A container with a cover, the container (2) having an upper edge portion (6) with an outer, downwardly directed flange (8) and the cover (16) having at its edge portion a U-shaped, downwardly open section (18) which when the cover is positioned on the con-

tainer encloses the upper edge portion of the container while providing a sealing action between the upper edge portion of the container and the U-shaped section of the cover along one or several peripherally extending sealing surfaces, the downwardly directed flange (8) of the container having an upwardly foldable portion (10) which is adapted to lift the cover from the edge portion of the container when it is folded upwards by engagement with the edge of the cover, **characterized** in that all peripherally extending sealing surfaces (22, 24) are positioned separated from the upwardly foldable portion (10) of the outer, downwardly directed flange (8) of the container so that the sealing surfaces (22, 24) maintain their sealing effect subsequently to the first time removal of the cover (16) by means of the upwardly foldable portion (10).

2. A container as claimed in claim 1, **characterized** in that the U-shaped, downwardly open section (18) of the cover (16) when the cover (16) is positioned on the container, encloses the upper edge portion (6) of the container while providing a sealing action between the upper edge portion of the container and the U-shaped section of the cover along two or more, peripherally extending sealing surfaces (22, 24) which are separated from the upwardly foldable portion (10) of the outer, downwardly directed flange (8) of the container.
3. A container as claimed in claim 1, **characterized** in that one of the peripherally extending sealing surfaces is constituted by an upwardly directed edge (22) at the upper edge portion (6) of the container and engaging a groove (20) in the U-shaped section (18) of the cover.
4. A container as claimed in claim 1, **characterized** in that one of the peripherally extending sealing surfaces is constituted by an outwardly directed, peripherally extending projection (24) positioned at the upper edge portion (6) of the container and engaging an opposite surface (28) of the U-shaped section (18) of the cover.
5. A container as claimed in claim 1, **characterized** in that the U-shaped, downwardly open section (18) of the cover when the cover (16) is positioned on the container, encloses the upper edge portion (6) of the container while providing a sealing action between the upper edge portion of the container and the U-shaped section of the cover along two peripherally extending sealing surfaces, one sealing surface being formed by an upwardly directed edge (22) formed at the upper edge portion of the container and engaging a groove (20) in the U-shaped section of the cover and the other sealing surface being formed by an outwardly directed, peripherally

extending projection (24) provided at the upper edge portion of the container and engaging an opposite surface (28) of the U-shaped section of the cover.

5

6. A container as claimed in any of the preceding claims, **characterized** in that the upper edge portion (6) of the container and the U-shaped section (18) of the cover are provided with engagement surfaces (24, 26) engaging each other to fix the cover 10 to the container when the cover is positioned thereon.
7. A container as claimed in claims 4 and 6, **characterized** in that the engagement surface positioned 15 at the upper edge portion of the container is provided at the outwardly directed, peripherally extending projection (24) at which the peripherally extending sealing surface is provided and that this projection 20 when the cover is positioned on the container engages a complementary projection (26) at the U-shaped section of the cover so as to fix the lock (16) to the container (2).
8. A container as claimed in any of the preceding 25 claims, **characterized** in that the upwardly foldable portion (10) is adapted to act in a vertical direction so that the edge of the cover (16) is at least initially displaced outwards so that the engagement between the edge of the cover and the edge portion 30 of the container comes to an end.
9. A container as claimed in claim 8, **characterized** in that the upwardly foldable portion forms a lever 35 when it is folded upwards.

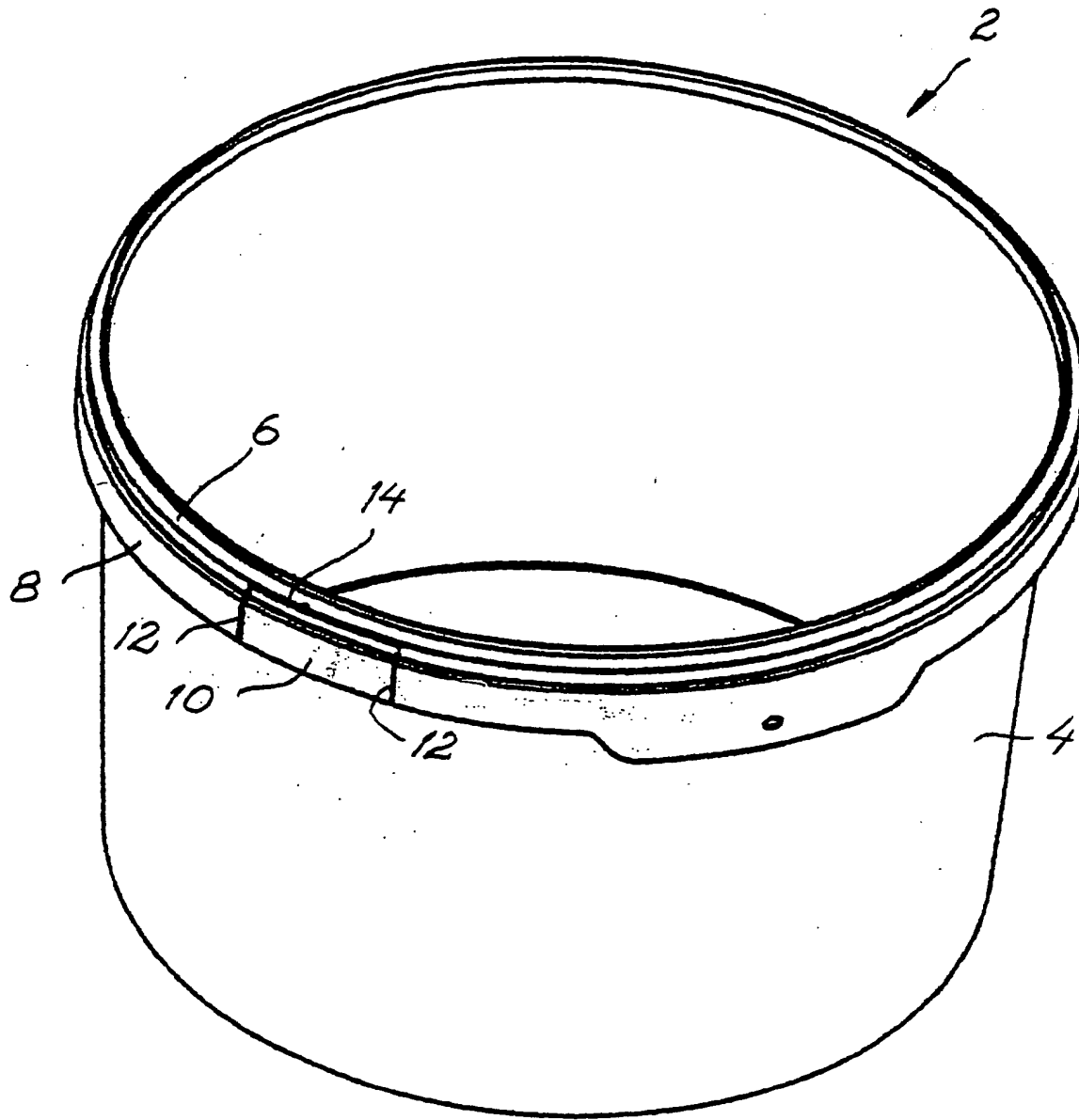
35

40

45

50

55



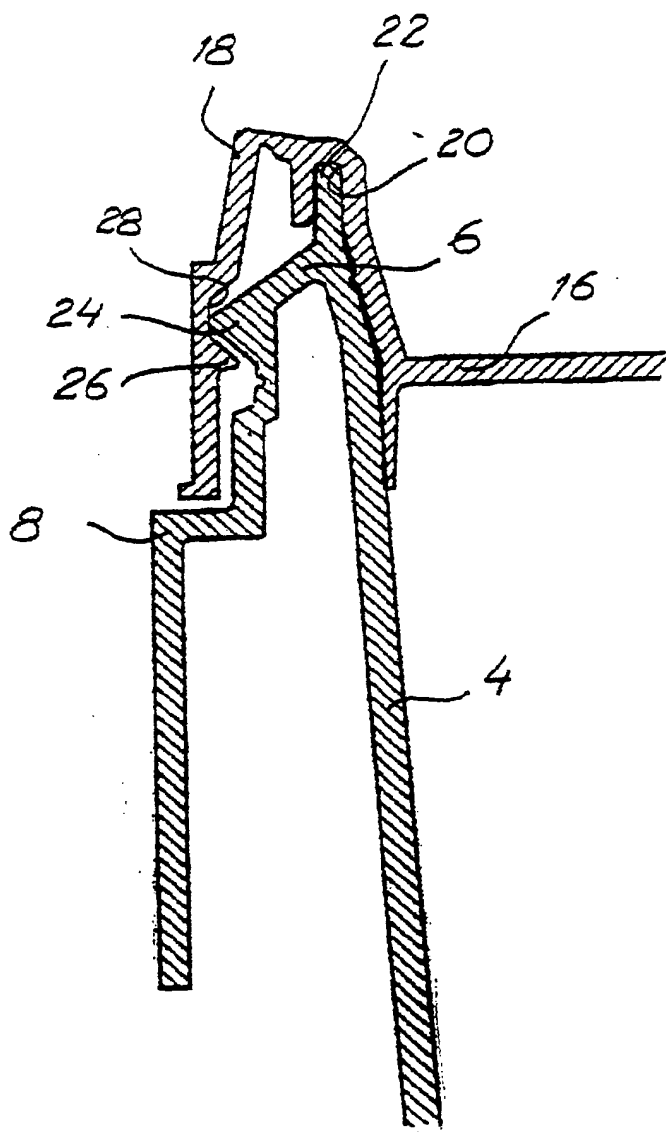


Fig. 2

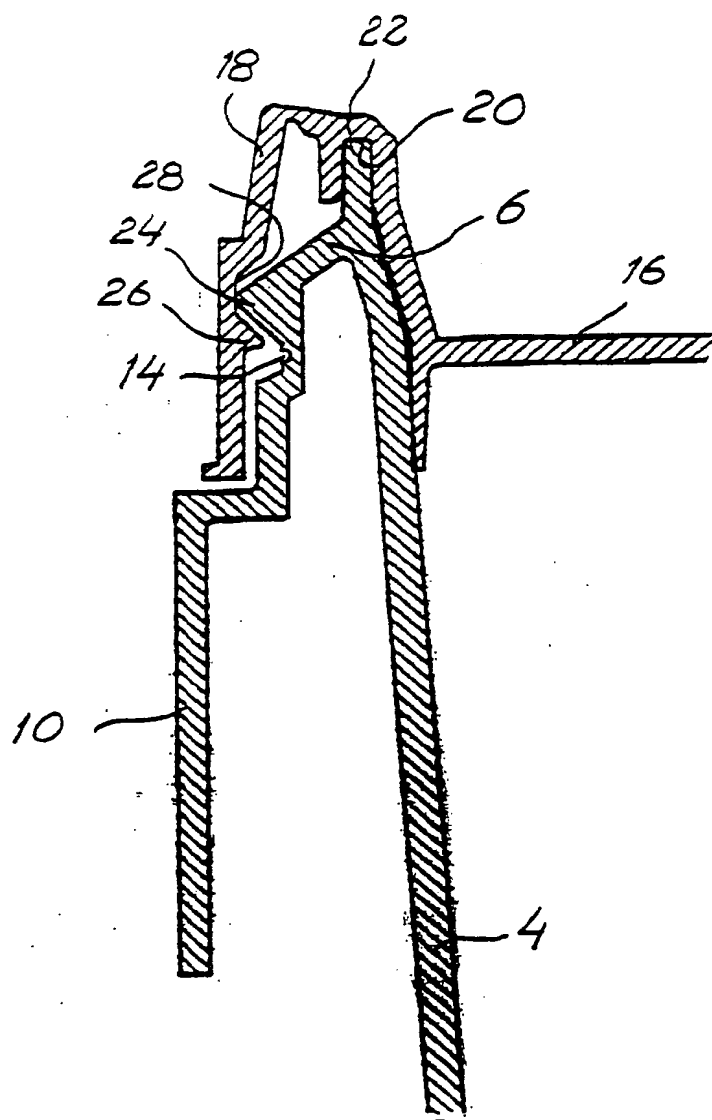


Fig. 3

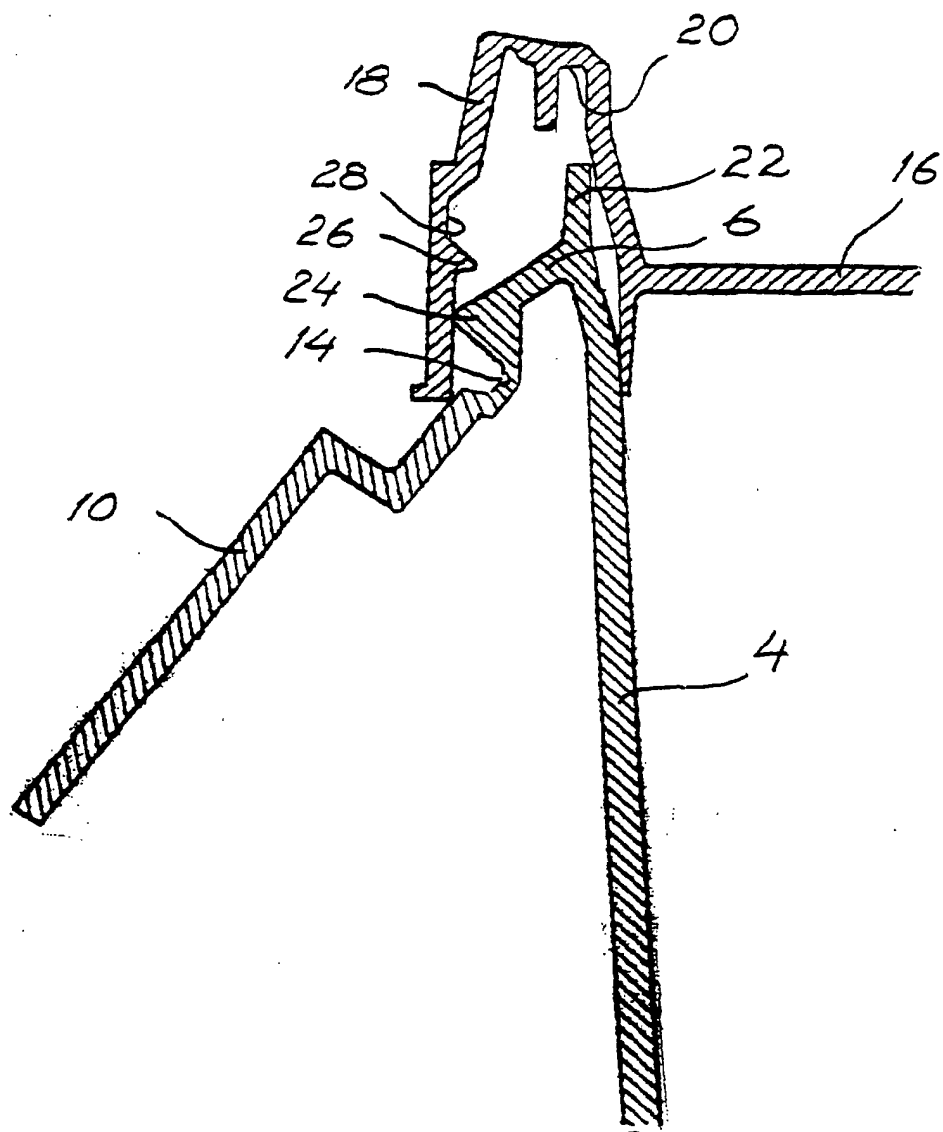


Fig. 4



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 01 10 0943

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
A, D	EP 0 565 967 A (SAIER GMBH) 20 October 1993 (1993-10-20) * column 1-4; figures 1-6 * ---	1	B65D43/02 B65D21/02 B65D43/26
A	EP 0 538 654 A (LAGAN PLAST AB) 28 April 1993 (1993-04-28) * column 4, line 35 - column 7, line 57; figures 1-12 * ---	1	
A	DE 299 08 053 U (SUPERFOS) 11 November 1999 (1999-11-11) * page 7; figures 1-7 * -----	1	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			B65D
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
THE HAGUE		1 June 2001	Vollering, J
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>I : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

EP01100943.1 (1993-10-20)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 01 10 0943

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

01-06-2001

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 565967 A	20-10-1993	DE 9205256 U	17-06-1992
		AT 125510 T	15-08-1995
		DE 59300395 D	31-08-1995
EP 538654 A	28-04-1993	SE 469794 B	13-09-1993
		AT 138033 T	15-06-1996
		DE 69210749 D	20-06-1996
		DE 69210749 T	23-01-1997
		DK 538654 T	03-06-1996
		ES 2086604 T	01-07-1996
		FI 924764 A	23-04-1993
		NO 924084 A	23-04-1993
DE 29908053 U	07-10-1999	SE 9103076 A	23-04-1993
		EP 1052183 A	15-11-2000

EPC FORM 2046B

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82